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ABSTRACT

Stress and its influence upon physiological and emotional functioning has been well documented in research literature. In order to extend this research to study the relationship between accumulated life stress, symptoms, and coping responses, 202 college graduates and undergraduates, (144 females and 58 males) responded to three self-report measures. The surveys examined life stress, i.e., 28 college student life events, the frequency of 16 stress-related symptoms (e.g., insomnia, headache, asthma), and 32 coping behaviors (including task-orientation, rumination, hostility, and social affiliation) in response to specific stressful situations. Results showed a significant relationship between life stress and the subsequent reporting of specific stress-related symptoms, e.g., tension/irritability, hyperventilation, and heartburn. Further, both cognitive and subjective appraisals of life stress positively correlated with symptoms. No relationship was found to exist between life stress and alcohol, marijuana, or hard drug use. Future research should focus on the functional relationship between stress and cognitive, subjective appraisal which may mediate health outcomes. The surveys are appended. (Author/BL)

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LIFE STRESS: RELATED SYMPTOMS, SUBJECTIVE APPRAISAL and COPING STYLES

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Life Stress: related symptoms, subjective appraisal and coping styles

Abstract

The study of stress and its related influence upon physiological and emotional functioning has been well documented in the research literature. Current research has demonstrated an interesting relationship between the experience of life stress and the advent of such physical distress as tension headache, peptic ulcer, backache, myocardial infarction, and cancer as well as the whole range of neurotic and psychotic disorders. This study extended the research to investigate the relationship between accumulated life stress (as assessed quantitatively and subjectively) and symptoms, as well as coping responses. A sample of 202 undergraduate and graduate college volunteers responded to three separate self-report measures which measured the following: (1) life stress, (2) frequency of stress-related symptoms experienced, and (3) coping styles. Results indicated that both physical and emotional symptoms are related positively to higher life change unit values. Consistent with previous research, a modest yet significant relationship was demonstrated between several symptoms and life stress as assessed quantitatively. Special interest was the enhancement of the majority of product-moment values when symptoms were correlated with each individual's subjective estimate of perceived stress. The utility of cognitive appraisal in assessing degree of stress experience was presented. Results suggested that cognitive/subjective appraisal may be a useful method and key component in the assessment of life stress. Component analysis of symptoms supported this notion. Contrary to popular belief, no relationship was demonstrated between life stress and alcohol, marijuana and hard drug use.

Method

Subjects. Participants were 202 volunteers, 144 females and 58 males, from undergraduate and graduate psychology courses at a midwestern university. Ages ranged from 17 to 56, with a mean age of 21.

Instruments and Procedure. Materials consisted of three separate sheets of paper entitled Form A, Form B and Form C (see Appendix A). Form A includes 28 college student life events, a modified version of the SRRS adopted by Girdano and Everly (Controlling Stress and Tension, 1979). Form B measures the frequency of an individual's experience with 15 stress-related reactions (e.g., insomnia, headache, asthma, etc.). In addition, one item (#44) measured personal appraisal of the degree of stress that individual had felt in the past year. Form C is a series of statements designed to tap into specific coping behaviors in response to two specific stressful situations. These coping responses included: task-orientation, rumination, hostility and social affiliation. Materials were administered on a group basis within seven classrooms.

Results. Relationship between current life stress (Form A) and symptoms (Form B) were examined using product-moment correlation coefficients. Several symptoms showed a modest yet significant positive association with life stress (depression/ $r = .27$, $p = .001$; tension/irritability/ $r = .22$, $p = .001$; hyperventilation/ $r = .22$, $p = .001$; heartburn/ $r = .22$, $p = .001$). Item 44, a subjective evaluation of life stress, correlated .26 with Form A. See Table I for pattern of correlation with item 44 with other symptoms.

The 15 specific symptom items were subjected to a principal component analysis. Four components were extracted and rotated to a varimax criterion: (1) subjective distress (e.g., depression, rumination) was correlated with Form A ($r = .23$, $p = .001$) and with item 44 ($r = .46$, $p = .001$); (2) direct

physical distress (e.g., heartburn, headache), was correlated with Form A ($r = .24$, $p = .001$) and item 44 ($r = .26$, $p = .001$); (3) drug or chemical use; (4) observable physical distress (e.g., tics/tremors, hyperventilation). Correlation of each volunteer's component scores with life stress and subjective stress are given in Table I.

Discussion

Consistent with previous research, data suggest a modest yet significant relationship between life stress (Form A) and the subsequent reporting of specific stress-related symptoms. Enhanced product-moment values across the majority of symptoms were found in conjunction with volunteers' subjective interpretation of their stress. Cognitive appraisal may be a central feature in the assessment of life stress. Component analysis of symptoms reinforces this idea. Both Form A and item 44 of Form B predicted those symptoms in the direct physical component with equal success. Item 44 shows significantly better predictive ability in the subjective distress component. Neither Form A or item 44 were able to predict with accuracy symptoms in the chemical/drugs or overt physical components.

Results indicate that symptoms of both psychological and physical kinds are positively related to higher life change unit values. Of special interest is the demonstration of no relationship between life stress and popularized tension reducing agents (alcohol, marijuana, and hard drugs). Future, controlled studies are necessary to investigate the functional relationship between stress and cognitive, subjective appraisal which may mediate health outcomes.

Table 1
Product-moment coefficients

Symptoms	Life stress	Subjective stress ¹
insomnia	.17**	.19**
headache	.11	.18**
alcohol use	.01	.05
depression	.27***	.47***
gastrointestinal upset	.19**	.29***
heartburn	.22***	.15*
marijuana use	.01	.00
skin disorder	.06	.10*
hard drugs	.12*	.08
hyperventilation	.22***	.15*
tension/irritability	.22***	.41***
tics/tremors	.13*	.20**
asthma	.07	.09
rumination	.16*	.46***
coughs/colds	.12*	.12*
subjective stress	.26***	1.00
Component score		
subjective distress	.23***	.46***
chemical/drugs	.06	.03
direct physical	.24***	.26***
overt physical	.03	.05

¹Represents participants response to item 44.

* $p \leq .05$

** $p \leq .01$

*** $p \leq .001$

Appendix A: Forms A, B, and C

Total anonymity and confidentiality in completing this form is guaranteed. Please respond to each item as honestly as possible.

Form A

Instructions: Below (items 1-28) are listed events which occur in the life of a college student. If you have experienced the event in the last 12 months, fill in the letter (A) on your answer sheet. If you have not experienced the event in the last 12 months, fill in the letter (B). If you have experienced a given event more than once in the last year, fill in the letter (C). In summary:

- (A) I have experienced this event in the past year.
- (B) I have not experienced this event in the past year.
- (C) I have experienced this event more than once in the past year.

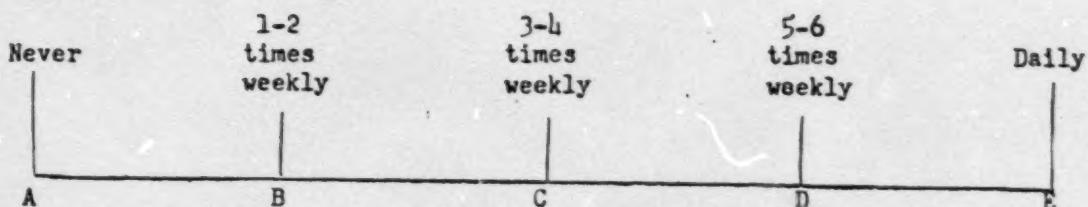
Events

1. Death of a close family member.
2. Jail term.
3. Final year or first year in college.
4. Pregnancy (to you or caused by you).
5. Severe personal illness or injury.
6. Marriage.
7. Any interpersonal or relationship problems.
8. Financial difficulties.
9. Death of a close friend.
10. Arguments with your roommate (more than every other day).
11. Major disagreements with your family.
12. Major change in personal habits.
13. Change in living arrangement.
14. Beginning or ending a job.
15. Problems with your boss or professor.
16. Outstanding personal achievement.
17. Failure in some course.
18. Final exams.
19. Increased or decreased dating.
20. Change in working conditions.
21. Change in your major.
22. Change in your sleeping habits.
23. Several-day vacation.
24. Change in eating habits.
25. Family reunion.
26. Change in recreational activities.
27. Minor illness or injury.
28. Minor violations of the law.

Form B

Instructions: Respond to the following statements (items 29-44) with the letter on Scale 1 which best describes the frequency with which you have experienced each statement within the last 4 weeks, beginning today and going back.

Scale 1



Example: If you have smoked marijuana on the average of 5 times a week over the last 4 weeks, you would respond to item #35 by filling in letter D on your answer sheet.

- 29. I have taken 25 minutes or more to fall asleep.
- 30. I have experienced a headache.
- 31. I have drunk wine, beer, or alcohol.
- 32. I have felt sad and down/depressed.
- 33. I have experienced stomach upset.
- 34. I have developed heartburn.
- 35. I have smoked pot.
- 36. My skin has broken-out and/or developed a rash or irritation.
- 37. I have taken harder drugs (cocaine, LSD, uppers, etc.).
- 38. I have experienced episodes of dizziness or light-headedness.
- 39. I have felt tense and/or irritable.
- 40. I have experienced tics, involuntary twitches, and/or tremors.
- 41. I have experienced episodes of asthma.
- 42. I have thought and/or worried about those things which bother me.
- 43. I have experienced coughs, colds, and/or general congestion.
- 44. In the past year, I have experienced:
 - A. no stress or pressure
 - B. slight stress and pressure
 - C. moderate stress and pressure
 - D. extreme stress and pressure
 - E. unbearable stress and pressure

Form C

In this situation, how likely would you be to perform each of the actions listed:

A	B	C	D	E
Never				Always

You are getting up to give a speech before a large group.

45. Think about how I got into this.
46. Tell myself I can handle this.
47. Get angry about unrelated things that don't work out right.
48. Concentrate on what is most important.
49. Wish this were over.
50. Seek the company of friends.
51. Observe other people who might be about.
52. Pay attention to my bodily sensations.
53. Try and see the humor in the situation.
54. Get angry with other people.
55. Talk to other people about what is happening.
56. Plan how to approach the situation.
57. Try to carefully understand what I am expected to do.
58. Get angry with myself.
59. Tell someone how I feel.
60. Seek reassurance from others.

You are starting out in a sail boat onto a rough sea.

61. Think about how I got into this.
62. Tell myself I can handle this.
63. Get angry about unrelated things that don't work out right.
64. Concentrate on what is most important.
65. Wish this were over.
66. Seek the company of friends.
67. Observe other people who might be about.
68. Pay attention to my bodily sensations.
69. Try to see the humor in the situation.
70. Get angry with other people.
71. Talk to other people about what is happening.
72. Plan how to approach the situation.
73. Try to carefully understand what I am expected to do.
74. Get angry with myself.
75. Tell someone how I feel.
76. Seek reassurance from others.